

**LAUREL MOUNTAIN RESOURCES, LLC  
KDNR PERMIT NO. 813-0344 A1  
KPDES PERMIT NO. KYG045981**

**ENHANCED BEST MANAGEMENT PRACTICES PLAN**

**MARCH 2010**

**Facility Description**

The proposed project is a surface mining operation located near Stevenson in Breathitt County, Kentucky. See the attached Site Map and photos for additional information. The proposed project includes construction of seven temporary ponds and dugouts (Pond SS-4, Pond SS-8, Pond SS-10, Pond SS-11, Dugout BS-DD, Dugout BS-EE, and Dugout BS-FF), which have a drainage area of 191.01 acres and will discharge into Calhoun Branch and Andy's Branch of Quicksand Creek, and Sulfur Springs Fork of Press Howard Fork.

**Background**

The Kentucky regulations regarding water quality (401 KAR 5:002) define Best Management Practices as:

1. Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the commonwealth, and
2. Treatment requirements, operating procedures, practices to control site run-off, pollution of surface water and groundwater from nonpoint sources, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Best Management Practices Policy and Objectives**

It is the policy of Laurel Mountain Resources, LLC to operate its facilities in an environmentally responsible manner minimizing the potential for release of pollutants to the environment from ancillary activities, to immediately respond, and to provide sufficient resources for the mitigation of any environmental incident that may originate from its facilities.

It is the objective of this Best Management Practices (BMP) Plan to identify those areas which pose a potential risk of an uncontrolled release of pollutants to the environment, to assess that risk, and to provide operational controls and procedures to minimize that risk.

**General Best Management Practices**

The applicant will utilize Best Management Practices to reduce sediment impacts on aquatic resources. The BMPs to be utilized include the following:

**Soil Stabilization Practices**

- Natural vegetation adjacent to streams will be maintained to ensure a stable stream bank.
- Establishment of a protective vegetative cover by the prompt reseeding of disturbed areas.
- Utilizing mulches when reseeding disturbed areas.
- Grading and shaping of backfilled areas to reduce erosion and sediment production.
- Placement of rock rip-rap, where necessary, to reduce erosion and sediment production

#### Perimeter Structural Practices

- Placement of silt fences, where necessary and practicable, to reduce erosion and sediment production.
- Placement of straw bale barriers, where necessary, to reduce erosion and sediment production.

#### Storm Water Management Devices

- Construction of sediment basins to protect water quality.
- Construction of diversion ditches, where necessary, to manage and divert runoff.
- Work near or in stream channels will be performed during no/low flow or dry weather periods.

### **Site-specific / Enhanced Best Management Practices**

#### Diversion Berms

A diversion berm is a long, mounded collar of compacted soil bordering an excavated area. The proposed project uses two types of berms (earthen and rock) to intercept runoff and direct it around the site. See the attached Site Plan for details. The earthen berm (see Photo 1) prevents runoff from leaving the site and directly entering Calhoun Branch and Andys Branch of Quicksand Creek, and Sulfur Springs Fork of Press Howard Fork. Instead, runoff is diverted into dugouts and ponds for settling and eventual discharge. In addition, rock berms collect sediment and reduce runoff velocity, allowing infiltration and filtering before the runoff reaches the pond.

#### Vegetated Buffer

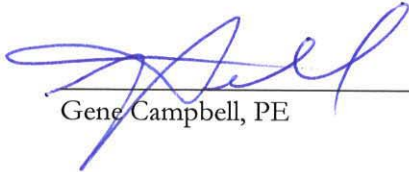
Proposed ponds SS-8 and SS-10, along with Dugouts DD-FF will not discharge directly to Andys Branch and Sulfur Springs. Instead, these sediment control structures will discharge approximately 50-500 feet away from the stream, into a vegetated grassy area (see Photo 6). Discharge into this vegetated buffer will retard flow and reduce runoff volume, as well as allow infiltration and filtering of the discharge before it enters Andys Branch and Sulfur Springs.

#### Pond Cleanout Frequency

Regulatory requirements do not call for sediment removal until the pond has reached the maximum sediment storage level. However, more frequent sediment removal can prevent discharges of sediment-laden water, thereby decreasing sediment loads and facilitating compliance with effluent limitations. Laurel Mountain will remove sediment at or prior to 60% of the maximum sediment storage level. This increased sediment removal frequency will prevent transport of excess sediment and other pollutants to Calhoun Branch and Andy's Branch of Quicksand Creek, and Sulfur Springs Fork of Press Howard Fork.

Review and Certification

I hereby certify and attest that I am sufficiently familiar with the facilities addressed, have reviewed this BMP plan and associated plans, and that to the best of my knowledge and belief, that the information contained in these plans is true, complete and accurate. Therefore, these plans shall be implemented as herein described.

  
\_\_\_\_\_  
Gene Campbell, PE

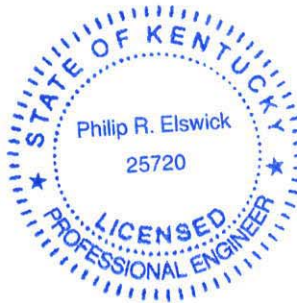
3-16-2010  
\_\_\_\_\_  
Date

I hereby certify and attest that his plan has been prepared in accordance with good engineering practices.

  
\_\_\_\_\_  
Philip R. Elswick, PE

4/13/10  
\_\_\_\_\_  
Date

25720  
\_\_\_\_\_  
Registration Number





UT OF SULPHUR SPRINGS

STREAM

VEGETATED ZONE

EMERGENCY SPILLWAY

BERM

BERM

VEGETATED  
ZONE

BERM

VEGETATED  
ZONE

HAUL ROAD

DUGOUT

DATE: 04/12/10

SCALE: NONE

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DRAWN BY: D.HANNAH

ENHANCED BEST MANAGEMENT PRACTICES  
PARTIAL SITE MAP  
KDNR PERMIT NO.813-0344 AM.1

  
Lexington, Ky. • Hazard, Ky. • Big Rock, Va  
Charleston, Wv • Chapmanville, Wv  
Bridgeport, Wv • Wise, Va

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# Laurel Mountain Resources, LLC 813-0344 A1 KPDES



Earthen Berm



Dugout



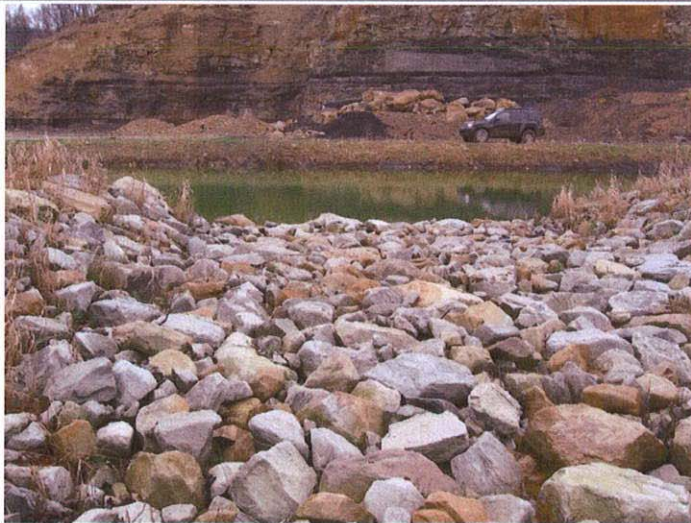
Dugout - Showing Haul Road and Berm



# Laurel Mountain Resources, LLC 813-0344 A1 KPDES



Dugout Outlet



Dugout Outlet Facing into Structure



Vegetative Barrier



# Laurel Mountain Resources, LLC 813-0344 A1 KPDES



Pond outlet and drainway



Haul Road Berm- adjacent to Pond



Pond Emergency Spillway



## Laurel Mountain Resources, LLC 813-0344 A1 KPDES



Pond Drainway



UT of Quicksand below Pond Drain